Regional Water Quality Control Plant

Operated by the City of Palo Alto
for the East Palo Alto Sanitary District,
Los Altos, Los Altos Hills, Mountain View,
Palo Alto, and Stanford

DISCHARGE PERMIT

Permit Number: **08101**

Permittee: **NASA/AMES Research Center**

Facility: **Moffett Field, CA 94035-1000**

Primary Activity: **Federal Government Research Facility**

Category: **Non-EPA, SIU**

This Discharge Permit is granted to the Permittee to discharge industrial and domestic wastewater from the Facility to the City of Palo Alto's sewer collection system in compliance with Chapter 16.09 of the Palo Alto Municipal Code (Sewer Use Ordinance), any applicable provisions of Federal or State law and regulations, and in accordance with all provisions set forth herein. The Permittee's attention is specifically directed to Attachment 2 (Standard Permit Conditions) of this permit, which refers to certain provisions of the Sewer Use Ordinance. Violation of the conditions set forth herein may result in civil and criminal penalties as described in Section 16.09.140 and 16.09.141 of the Sewer Use Ordinance including but not limited to civil liability of $25,000 per day. Administrative civil penalties may also be assessed by a hearing officer as described in Section 16.09.142. In addition, industrial dischargers who are found to have significantly violated (criteria defined in Attachment 7) the provisions of Chapter 16.09 are subject to public notification in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the City of Palo Alto Regional Water Quality Control Plant (RWQCP).

2501 Embarcadero Way Palo Alto Ca 94303 Tel.: (650) 329-2598 Fax: (650) 494-3531

This permit is issued to the Permittee in accordance with the application filed on **May 20, 2008** with the RWQCP and in conformity with plans, specifications, and other data submitted in support of the above application. This permit is not transferable without submission of a new discharge permit application and written consent of the superintendent. The Permittee shall submit a modified permit application along with relevant plans and supporting documentation whenever a material change to the facility or in quantity or type of discharge is anticipated which is not specifically authorized in this permit or specified in the application submission filed on **May 20, 2008.**

Original Date:	**October 23, 1983**
Effective Date:	**July 19, 2008**
Expiration Date:	**July 19, 2011**

Phil Bobel, Manager
Environmental Compliance Division

Attachments:

1. Specific Permit Conditions
2. Standard Conditions
3. Total Toxic Organics
4. Sampling Instructions
5. Sampling Location Diagram
6. Sampling Location Photograph(s)
7. Definition of Significant Violation
8. Sewer Use Ordinance

ATTACHMENT 1
Specific Permit Conditions

Part A Discharge Conditions

1. Discharge Rates

The average daily wastewater discharge volume for each sampling location is summarized in the table below. Any daily discharge greater than the maximum flow limit listed in the table below requires the prior written approval of the Palo Alto Regional Water Quality Control Plant (RWQCP). The Sampling Locations are described in Part C, Section 1.a.

Sampling Location	Average Flow (gpd)	Maximum Flow Limit (gpd)	Discharge Code*
1	120,638	300,000	E
5	450	3,000	I
8	41,000	70,000	I
51	10,000	100,000	I
52	40,000	60,000	I

*E: Sampling locations that do not discharge into other sampling locations
I: Sampling locations that discharge into other sampling locations

Construction dewatering water, water removed from vaults, and water pumped from ground water monitoring wells may be discharged to the sanitary sewer, without notifying the RWQCP, if the discharge volume is less than 3,000 gallons per project and the requirements specified in Part C.1.b of this Attachment are met. Discharges over 3,000 gallons require the prior approval of the RWQCP. The following information shall be required to obtain prior approval: source of the water, sampling results, chain of custody, volume and location of discharge. A log shall be maintained for all discharges that are 3,000 gallons or less. The log shall indicate, at a minimum, the source, volume, pH, TDS, and discharge location for each discharge.

2. Duration of Discharge

The duration of discharge of process wastewater from the Facility is typically seven days per week and twenty-four hours per day.

Part B Discharge Quality

1. Effluent Limitations

During the term of this permit, the discharge from the Permittee shall not exceed the effluent limitations specified in Tables 1A, 1B, and 1C. All limits in Tables 1A, 1B, and 1C, except suspended solids, are maximum concentrations that apply to instantaneous and composite samples. Suspended solids have separate instantaneous and composite sample limits. All values in Tables 1A, 1B, and 1C are in milligrams per liter (mg/l) except for pH.

Tables 1A, 1B, and 1C include local limits for Single Toxic Organics (STO) and Total Toxic Organics (TTO), and may include a federal limit for TTO. The toxic organics included in the local and federal TTO limits are listed in Attachment 3. TTO is the sum of all concentrations greater than ten parts per billion and STO is the highest single toxic organic concentration.

2. Prohibition against Dilution

The Permittee shall not dilute process waste streams. In addition, the Permittee shall not increase the use of process water, or in any way, dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with requirements contained in the Sewer Use Ordinance or this permit.

Table 1A: Applicable Effluent Limits

Sampling Locations 1 Pollutants	Local Maximum[1] (mg/l)		Federal Maximum For Any One Day (mg/l)	Federal Monthly Average Shall Not Exceed (mg/l)
Oil & Grease[2]	20			
Oil & Grease (total)	200			
Chemical Oxygen Demand	None			
Ammonia	None			
Suspended Solids	3,000[3]			
Total Dissolved Solids	5000[4]			
Arsenic	0.05			
Barium	2.5			
Beryllium	0.375			
Boron	0.5			
Cadmium	0.05			
Chromium, Hexavalent	0.5			
Chromium (total)	1.0			
Cobalt	0.5			
Copper[5]	0.32			
Cyanide	0.5			
Fluoride	65			
Formaldehyde	2.5			
Lead	0.25			
Manganese	0.5			
Mercaptans & Dissolved Sulfides	0.05			
Mercury	0.01			
Methyl Tertiary Butyl Ether (MTBE)	0.375			
Nickel	0.5			
Phenols	0.5			
Selenium	0.5			
Silver	0.25			
Zinc	1.0			
Single Toxic Organic (STO)	0.75			
Total Toxic Organic (TTO)	1.0			
pH	Min 5.0	Max 11.0		

[1] For discharges greater than 50,000 gallons per day (gpd), the local maximum limits specified in the table are one-half the local limit values with the exception of the conventional pollutants, STO, TTO, copper, fluoride, nickel, mercury and silver. For example, if the discharge is greater than 50,000 gpd the local maximum lead limit shall be 0.25 mg/l.

[2] Gravity separation at a temperature of 20°C, and a pH of 4.5.

[3] Applies to composite samples; the discharge limit for instantaneous samples is 6,000 mg/l.

[4] Applies to composite samples; the discharge limit for instantaneous samples is 10,000 mg/l.

[5] Special limit derivation accounts for total volume of cooling towers discharging less than 2000 gpd.

$$\frac{(4746 \text{ gallons blowdown})(2 \text{ mg/liter}) + (115892 \text{ gallons other})(0.25 \text{ mg/liter})}{120638 \text{ gallons total}} = 0.32 \text{ mg/liter}$$

Table 1B: Applicable Effluent Limits

Sampling Location 5 Pollutants	Local Maximum[1] (mg/l)		Federal Maximum For Any One Day (mg/l)	Federal Monthly Average Shall Not Exceed (mg/l)
Oil & Grease[2]	20			
Oil & Grease (total)	200			
Chemical Oxygen Demand	None			
Ammonia	None			
Suspended Solids	3,000[3]			
Total Dissolved Solids	5000[4]			
Arsenic	0.1			
Barium	5.0			
Beryllium	0.75			
Boron	1.0			
Cadmium	0.1			
Chromium, Hexavalent	1.0			
Chromium (total)	2.0			
Cobalt	1.0			
Copper	2.0			
Cyanide	1.0			
Fluoride	65			
Formaldehyde	5.0			
Lead	0.5			
Manganese	1.0			
Mercaptans & Dissolved Sulfides	0.1			
Mercury	0.01			
Methyl Tertiary Butyl Ether (MTBE)	0.75			
Nickel	0.5			
Phenols	1.0			
Selenium	1.0			
Silver	0.25			
Zinc	2.0			
Single Toxic Organic (STO)	0.75			
Total Toxic Organic (TTO)	1.0			
pH	Min 5.0	Max 11.0		

[1] For discharges greater than 50,000 gallons per day (gpd), the local maximum limits specified in the table above shall be one-half the values listed with the exception of the conventional pollutants, STO, TTO, copper, fluoride, nickel, mercury and silver. For example, if the discharge is greater than 50,000 gpd the local maximum lead limit shall be 0.25 mg/l.

[2] Gravity separation at a temperature of 20°C, and a pH of 4.5.

[3] Applies to composite samples; the discharge limit for instantaneous samples is 6,000 mg/l.

[4] Applies to composite samples; the discharge limit for instantaneous samples is 10,000 mg/l.

Table 1C: Applicable Effluent Limits

Sampling Location 8, 51, 52 Pollutants	Local Maximum[1] (mg/l)		Federal Maximum For Any One Day (mg/l)	Federal Monthly Average Shall Not Exceed (mg/l)
Oil & Grease[2]	20			
Oil & Grease (total)	200			
Chemical Oxygen Demand	None			
Ammonia	None			
Suspended Solids	3,000[3]			
Total Dissolved Solids	5000[4]			
Arsenic	0.1			
Barium	5.0			
Beryllium	0.75			
Boron	1.0			
Cadmium	0.1			
Chromium, Hexavalent	1.0			
Chromium (total)	2.0			
Cobalt	1.0			
Copper	0.25			
Cyanide	1.0			
Fluoride	65			
Formaldehyde	5.0			
Lead	0.5			
Manganese	1.0			
Mercaptans & Dissolved Sulfides	0.1			
Mercury	0.01			
Methyl Tertiary Butyl Ether (MTBE)	0.75			
Nickel	0.5			
Phenols	1.0			
Selenium	1.0			
Silver	0.25			
Zinc	2.0			
Single Toxic Organic (STO)	0.75			
Total Toxic Organic (TTO)	1.0			
pH	Min 5.0	Max 11.0		

[1] For discharges greater than 50,000 gallons per day (gpd), the local maximum limits specified in the table above shall be one-half the values listed with the exception of the conventional pollutants, STO, TTO, copper, fluoride, nickel, mercury and silver. For example, if the discharge is greater than 50,000 gpd the local maximum lead limit shall be 0.25 mg/l.

[2] Gravity separation at a temperature of 20°C, and a pH of 4.5.

[3] Applies to composite samples; the discharge limit for instantaneous samples is 6,000 mg/l.

[4] Applies to composite samples; the discharge limit for instantaneous samples is 10,000 mg/l.

Part C Monitoring, Reporting, and Record Keeping

The Permittee shall monitor the quality of its industrial wastewater discharge to the City of Palo Alto sewer collection system by implementing a sampling program as described in Part C, Section 1 of this permit. Reports must be submitted that detail sampling activities and results and discharge activities as described in Part C, Section 2 of this permit. Records shall be maintained of all self-monitoring activities as described in Part C, Section 3 of this permit.

1. Monitoring

   a. Sampling Locations

      The sampling location(s) are identified on the Sampling Location Diagram and in the Sampling Location Photograph(s) (see Attachments 5 and 6 respectively).

      Sample Location 1 is the open flume located on the east side of Parsons Ave. northwest of building N255. Flow at this point includes all wastewater, process and sanitary, from the section of NASA Ames Research Center that discharges to the City of Palo Alto Regional Water Quality Control Plant (RWQCP) (note: Part of NASA Ames Research Center discharges to the Sunnyvale Wastewater Treatment Plant).

      Sample Location 5 shall be the outfall after the oil/water separator located at the automotive wash rack at building N-251. Discharge through sampling location 5 includes wash water from the exterior cleaning of Government vehicles.

      Sample Location 8 shall be Tank T17, the final monitoring tank, of the metals removal and/or reverse osmosis treatment system located in building N271. Flow at this point includes treated wastewater from the cooling towers located at buildings N234A, N229 and N227. Flow through this sampling location also includes boiler blowdown from building N234A, oil/water separator water from building N250, and discharge from building N234A's basement sump pump. The basement sump pump in building N234A will only activate in the event of a leak of the ARC-JET cooling tower piping which runs through the basement. Groundwater treated at N271 shall not be discharged to the sanitary sewer without first verifying that the concentrations of As, Cd, Cr, Cu, Pb, Ni, Se, Zn, TTO, and TDS in the groundwater influent do not exceed the discharge limits specified in Table 3 of this Attachment prior to N271 treatment. The sampling analysis and chain of custody sheets shall be submitted prior to discharge from Tank T17.

      Sampling Locations 2, 3 & 4, which were established in prior permits, have been closed since operations that were monitored at these sampling locations have ceased.

      Sampling Location 6 and 7, which were established in prior discharge permits to monitor the air compressor condensate water at buildings N229A and N250 have

been closed. The air compressor condensate water from both buildings is now pumped to building N271 and treated in the metals removal treatment system. Discharge from building N271 is monitored at sampling location 8.

Sampling location 51 shall be the blowdown discharge from the Unitary cooling tower located in building N227. Discharge from this cooling tower can also be routed through the treatment system located in building N271 when sampling location 51 is not used. Discharge from N271 is monitored at sampling location 8.

Sampling location 52 shall be the blowdown discharge from the ARC-JET cooling tower located in building N234A. Discharge from this cooling tower can also be routed through the treatment system located in building N271 when sampling location 52 is not used. Discharge from N271 is monitored at sampling location 8.

Sampling Locations 53 and 54, which were established in prior discharge permits to monitor cooling tower blowdown from buildings N258 & N262/269 respectively are hereby closed. The average daily cooling tower blowdown volume from each of these cooling towers falls below 2000 gallons per day, which is the level at which sampling locations are typically established for cooling towers.

b. Groundwater and Construction Dewatering Discharges

i. Utility vaults with known contaminants
Water removed from utility vaults that have known contamination shall not be discharged to the sanitary sewer without first verifying that the concentrations of known and suspected contaminant(s) do not exceed the discharge limits specified in Table 3 of this Attachment. The sampling analysis and chain of custody sheets shall be submitted with each PRCC report.

ii. Utility vaults with no known contaminants
Water removed from utility vaults that have no known contamination shall be analyzed once semiannually for As, Cd, Cr, Cu, Pb, Ni, Se, Zn, TTO, and TDS. This water shall be subject to the discharge limits specified in Table 3 of this Attachment. The sampling analysis and chain of custody sheets shall be submitted with each PRCC report.

iii. Construction dewatering
Construction dewatering shall not be discharged to the sanitary sewer without first verifying that the concentrations of As, Cd, Cr, Cu, Pb, Ni, Se, Zn, TTO, and TDS do not exceed the discharge limits specified in Table 3 of this Attachment. The sampling analysis and chain of custody sheets shall be submitted with each PRCC report.

iv. Purging/Developing Groundwater Monitoring Wells
Water generated from purging/developing groundwater wells is currently

treated on-site and not discharged to the sanitary sewer. If needed, the RWQCP will allow this water to be discharged to the sanitary sewer, provided that the concentrations of the following parameters are verified to be in compliance with the discharge limits specified in Table 3 prior to discharge: As, Cd, Cr, Cu, Pb, Hg, Ag, Ni, Se, Zn, TTO, and TDS.

c. Sample Collection

Samples and measurements taken to meet the requirements of this permit or to comply with RWQCP directives shall be representative of typical work cycles and pollutant discharges. Sampling events shall be scheduled and conducted for days expected to be representative of normal working condition. Sampling results shall be submitted for all sampling events even if atypical conditions occur during the event. All sampling violations shall be reported per the requirements specified in Part C, Section 2.b of this permit.

All samples shall be collected and preserved using protocols specified in 40 Code of Federal Regulations (CFR) Part 136 and applicable Environmental Protection Agency (EPA) guidelines. Unless otherwise instructed in writing by the RWQCP, all samples collected shall be 24-hour composites except for phenols, cyanide, TTO, and pH. Phenols, cyanide, and pH samples shall be grab samples. TTO samples shall be lab-composited grab samples collected every two hours during the hours of process operation. A minimum of four grab samples shall be collected for each TTO sampling event.

d. TTO Monitoring

The Permittee has submitted a Toxic Organic Management Plan (TOMP) in lieu of conducting monitoring for the full list of toxic organics listed in Attachment 3. The subset of TTO compounds required for self-monitoring is specified in the Sampling Required column of Attachment 3. The RWQCP may conduct monitoring for any of the toxic organics listed in Attachment 3.

e. Sampling Frequency

All samples shall be collected and analyzed according to the schedule outlined in Table 2.

f. Analysis

Samples and measurements taken to meet the requirements of this permit or RWQCP directives shall be analyzed by a state certified laboratory. Flow, temperature, continuous pH, and internal process control self-monitoring are exempt from this requirement. Analysis of TTO samples shall be performed using EPA Method 601/602, EPA Method 624, or an approved method specified in 40 CFR, Part 136. Analysis for all other pollutants shall be conducted in accordance with EPA regulations found in 40 CFR 136. The analytical detection limit for all self-monitoring, except pH, shall be no greater than one tenth of the discharge limit for that pollutant.

g. Flow and pH Monitoring and Recording

The Permittee shall monitor the wastewater volume at sampling location 1, 8, 51, and 53 on a continuous basis. Additionally, the permittee shall monitor the wastewater pH at sampling location 1 and 8 on a continuous basis. Flow meter totalizer readings shall be recorded at a minimum once each week. pH data shall be recorded or logged at a minimum once every minute. Continuous pH monitoring systems shall be equipped with an alarm/notification function to immediately alert appropriate personnel of pH violations. The alarm system shall be tested at a minimum once per quarter to verify proper operation. Records of alarm testing shall be retained per the requirements specified in Part C, Section 3 of this permit. All pH and flow violations shall be reported per the requirements specified in Part C, Section 2.b of this permit.

Only appropriate pH and flow measurement and recording devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements taken. The selected device(s) shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with accepted industry standards for the type of device. Frequency of calibration of flow monitoring equipment shall be performed at a minimum once per calendar year or as specified by the equipment manufacturer. Frequency of calibration of pH monitoring equipment shall be performed at a minimum on a semi-annual basis. Monitoring and calibration records shall be retained per the requirements specified in Part C, Section 3 of this permit.

Table 2: Sampling Frequency

Parameter	Sampling Frequency By Quarter. Number of times per quarter				Sampling Location
	1st	2nd	3rd	4th	
COD					
NH3					
SS					
Arsenic	1	1	1	1	1
Beryllium					
Cadmium	1	1	1	1	1
Chromium (Total)	1	1	1	1	1
Chromium (Total)	**Monthly**				8, 51, 52
Copper	1	1	1	1	5
Copper	**Monthly**				1, 8, 51, 52
Cyanide	**Monthly**				1
Lead	**Monthly**				8, 51, 52
Lead	1	1	1	1	1, 5
Mercury	1	1	1	1	1
Nickel	1	1	1	1	1
Nickel	**Monthly**				8, 51, 52
Selenium	1	1	1	1	1
Silver	1	1	1	1	1
Zinc	1	1	1	1	5
Zinc	**Monthly**				1, 8, 51, 52
Fluoride		1		1	1
Formaldehyde					
Phenols					
TTO[1]	1	1	1	1	1
pH[2]	**Per Sampling Event**				5, 51, 52
pH[3]	**Continuous**				1, 8
Flow	**Continuous**				1, 8, 51, 52

- All metals samples shall be taken in duplicate. The duplicate shall be preserved and stored until the next sampling event for that parameter.
- [1] See Attachment 3 for list of specific TTO/STO compounds required for self-monitoring
- [2] pH monitoring requirement for Sampling Location 5, 51, & 52.
- [3] pH monitoring requirement for Sampling Locations 1 & 8.

2. Reporting

a. Provisions Governing Inaccurate, False, or Misleading Statements

It is unlawful for the Permittee or its agents to knowingly submit to the RWQCP any inaccurate, false, or misleading information of any kind. This includes, but is not limited to, information submitted in permit applications, Periodic Reports of Continued Compliance, and sampling and analysis reports and results. Submitting inaccurate, false, or misleading information to the RWQCP shall constitute a violation of the terms and conditions of this permit, 40 CFR 403.12(n), 18 United States Code Section 1001, and provisions of the PAMC.

b. Noncompliance

In the event the Permittee is unable to comply with any of the permit terms and conditions, except those listed in Part C, Section 2.c of this permit, due to any cause, the Permittee shall:

i. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance, and correct the problem;

ii. Inform RWQCP of the noncompliance as soon as possible but no later than twenty-four hours of the Permittee's knowledge of the noncompliance; and

iii. Submit a detailed, written report to the RWQCP within five days of the Permittee's knowledge of the noncompliance describing the nature and cause of the noncompliance, mitigation measures taken to correct the noncompliance and prevent reoccurrence, and any other pertinent information.

In addition, if the non-compliance is related to violations of the discharge standards specified in this permit or the Sewer Use Ordinance, repeat sampling and analysis of the violated pollutant(s) and submit results to the RWQCP within thirty (30) days after becoming aware of the violation;

Compliance with the provisions contained in Part C, Section 2.b above shall not relieve the Permittee of responsibility to maintain continuous compliance with the terms and conditions of this permit. Nor does it relieve the Permittee of liability for any expense, including but not limited to, costs for counter measures; loss or damage to the sewer system and/or treatment plant or treatment processes; or liability to reimburse any fines imposed on the City on account thereof; or for damages incurred by any third party, or any other liability.

c. Accidental or Slug Discharges; Treatment System Upsets, Failures, or Bypasses

In the event of any release to the sanitary sewer caused by spills; slug discharges; pretreatment system upsets, failures, or bypasses; or any other accidental discharges, the Permittee shall immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance, and correct

the problem. In addition, the Permittee shall:

i. Immediately verbally notify the RWQCP upon becoming aware of such incidents.

ii. As soon as practicable and throughout the incident, collect representative samples at the point of release and at any applicable sampling location(s).

iii. Submit a written report to the RWQCP within five days of the discharger's knowledge of the incident explaining: the nature, volume, and duration of the discharge; and mitigation measures taken to correct the noncompliance and prevent recurrence.

d. Unauthorized or Prohibited Releases to the Storm Drain System and Threatened Discharges to the Storm Drain System

The Permittee shall immediately take action to stop, contain, and cleanup threatened, unauthorized, or prohibited discharges to the storm drain system or otherwise stop the noncompliance and correct the problem. For releases that result in discharge into storm drain system catch basins, pipes, or creeks, the Permittee shall immediately notify the RWQCP upon becoming aware of such incidents.

e. Notification of Change

The Permittee shall notify the RWQCP in advance of any significant change in the volume or characteristics of discharge from the facility or any significant operational, process, or pretreatment system changes.

The Permittee shall immediately notify the RWQCP of changes that occur at the facility affecting the potential for a spill or slug discharge. A slug discharge is defined as any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or non-customary batch discharge.

e. Periodic Report of Continued Compliance (PRCC)

The Permittee is required to submit to the RWQCP a Periodic Report of Continued Compliance (PRCC) every six months. The due dates for the submittal of the PRCC's are July 15th and January 15th of each calendar year. These reports shall contain sampling and analysis records and results for all self-monitoring which occurred during the reporting period and describe any changes that may have affected the quantity or the quality of the effluent during the six month reporting period. The PRCC's shall be completed according to the guidelines provided by the RWQCP.

f. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit, the results of that monitoring shall be included in the applicable PRCC report.

g. Sampling Event Records

For each sample taken, the Permittee shall record, at a minimum, the following information:

(1) date, time, exact location, and method of sampling. For composite samples, the setup date/time, start date/time, end date/time, and pickup time are required;
(2) volume of wastewater discharged through the sampling location during a composite sampling event or the volume of wastewater discharged on the day of sampling for grab sampling events;
(3) sampling container type;
(4) preservative used in each container;
(5) indication that prior to preservation free chlorine was tested for and neutralized if present when collecting cyanide samples downstream of cyanide destruction units that employ chlorine;
(6) pollutants to be analyzed;
(7) indication if sampling container was sealed with a custody seal;
(8) indication if sampling container was refrigerated;
(9) individual who performed the sampling;
(10) analytical techniques or methods used for sample analysis;
(11) results of all analyses;
(12) dates the analysis was performed; and
(13) person(s) and company that performed the analysis.

3. Retention and Release of Records

The Permittee shall retain records of all self-monitoring information for a minimum of three (3) years and shall make such records available for inspection and copying to RWQCP staff upon request. Such information shall include, but not be limited to:

(1) sampling and analysis records for all self-monitoring
(2) pollution control and monitoring equipment calibration and maintenance records;
(3) copies of all reports required by this permit;
(4) continuous pH and flow monitoring records; and
(5) all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the Permittee or when requested by the RWQCP.

Upon request from RWQCP staff, the Permittee shall authorize the release of analytical reports, worksheets, and chain of custody forms directly from certified labs to the RWQCP.

Part D Quality Assurance/Quality Control

To assure that sampling collection and analysis meet the requirements of this permit, all metals samples must be collected in duplicate. The duplicate samples shall be preserved and stored until the next sampling event for that pollutant. The duplicate sample must be labeled as a duplicate and be made available to the RWQCP staff upon request.

Part E Compliance Schedule

1. Cooling System, Boiler, and Heat Exchanger Requirements

   a. Cooling System Additives

   The Permittee shall not add the following substances to any cooling systems:

   i. copper in excess of 2.0 mg/liter
   ii. any tributyl tin compound in excess of 0.1 mg/liter
   iii. chromium in excess of 2.0 mg/liter

   The above concentration limitations shall apply to any of the above listed substances prior to dilution with the cooling system water.

   b. Cooling System, Boiler, and Heat Exchanger Cleaning

   The Permittee shall sample the wastewater from cleaning of cooling systems, boilers, heat exchangers, and associated piping where a chemical cleaner or physical scouring is used in the cleaning process, prior to discharge of the wastewater to the sanitary sewer. The wastewater shall be analyzed for copper and any other constituents as specified by the RWQCP. Compliance with the 2.0 mg/l copper discharge limit shall be confirmed prior to discharge to the sanitary sewer.

   c. Electrical Devices

   Devices using electricity to dissolve copper or silver into cooling systems and water distribution systems are prohibited

   d. Copper Limit for Cooling System Flows Greater than 2,000 gpd

   Cooling systems with an average daily blowdown flow greater than 2,000 gallons during the months of April through October shall be subject to a maximum copper effluent limit of 0.25 mg/l.

   e. Cooling Tower and Boiler Blowdown Volumes

   The estimated average daily blowdown from each cooling tower and boiler discharging to the City of Palo Alto RWQCP shall be submitted every six months along with the PRCC.

2. Machine Shop Requirements

   The Permittee shall meet all machine shop requirements as outlined in Section 16.09.114 of the Sewer Use Ordinance.

3. Photo-Processing Requirements

   The Permittee shall meet all photo-processing requirements as outlined in Section 16.09.111 of the Sewer Use Ordinance.

4. Vehicle Service Facilities Requirements

   The Permittee shall meet all vehicle service facilities requirements as outlined in Section 16.09.113 of the Sewer Use Ordinance.

5. Maintenance of Treatment System at Sampling Location 8

   The Permittee shall maintain the microfiltration tanks for the N271 metals removal treatment in such a manner as to comply with the discharge limits in Table 1 of this attachment. The rinse solution analysis shall be submitted for approval prior to any discharge of maintenance rinse solutions.

6. Notification of New Process Connections to Sanitary Sewer

   The Permittee shall submit diagrams for any new connections made from process areas to the sanitary sewer. The diagrams shall include process diagrams and flow volumes and shall be submitted with the PRCC.

7. List of Manholes Used for Discharge of Groundwater

   The Permittee shall maintain and submit annually, with the January PRCC, a list of manholes used for the discharge of groundwater.

8. List of Utility Vaults

   The Permittee shall maintain and submit annually, with the January PRCC, a list of utility vaults having groundwater infiltration that are discharged to the sanitary sewer system.

9. Groundwater Discharge

   The Permittee shall submit with each PRCC the total quantity of groundwater discharged to the sanitary sewer, segregated into the three categories, utility vaults, groundwater monitoring well purges and construction dewatering. Sampling analysis and chain of custody sheets for samples collected from each category shall be included in the submission.

10. Groundwater Baseline TDS Submittal

    The Permittee shall submit TDS sample results from 10 different groundwater wells within the first 6 months following the date of this permit. Each TDS sample shall specify the total quantity of groundwater to be discharged to the sanitary sewer and be segregated into the three categories, utility vaults, groundwater monitoring well purges and construction dewatering. Sampling analysis and chain of custody sheets for samples collected shall be included in the submission.

11. Animal Facility Cage Washer

    The Permittee shall ensure that cage washer discharge, which does not drain to Sampling Location 1, complies with the pH limitations applicable to Sampling

Location 1. Material Safety Data Sheets, including information on solution pH, shall be submitted to the RWQCP prior to commencing use of any new cage washer detergents or chemicals.

12. Glass Wash Room

The Permittee shall ensure that discharge from its glass wash room, which does not drain to Sampling Location 1, complies with the pH limitations applicable to Sampling Location 1. Material Safety Data Sheets, including information on solution pH, shall be submitted to the RWQCP prior to commencing use of any new glass wash detergents or chemicals. In addition, the permittee shall not utilize chromic acid glassware cleaners.

13. Grease Removal Device (GRD) Maintenance

The Permittee shall maintain its GRD (interceptors or traps) by removing the liquid and solids content, at a minimum, on a semi-annual basis or more frequently as required to maintain grease removal efficiency. Maintenance shall be done in a manner which will prevent the trapped grease from escaping into the wastewater collection system. Maintenance records shall be retained for a minimum of three years and made available to RWQCP staff upon request.

14. Maintenance and Operation of Pollution Control and Monitoring Equipment

The Permittee shall at all times be responsible for the proper operation and maintenance of process and pollution control and monitoring systems installed to achieve compliance with the terms and conditions of this permit and the Sewer Use Ordinance. Maintenance records for process and pollution control and monitoring systems shall be retained per the requirements specified in Part C, Section 3 of this permit.

It shall be unlawful to tamper with or render inaccurate or divert flow from any monitoring device or equipment installed or operated pursuant to PAMC 16.09 or this permit. Doing so constitutes falsification of information as specified in Part C, Section 2.a of this permit.

15. Cooling System Flow and Discharge Limit

The Permittee shall compile data on cooling system blowdown during the months of April through October. The total cooling system blowdown during this time period shall be divided by the number of days of operation of the cooling system to determine the average daily blowdown flow. The average daily blowdown and supporting calculations shall be submitted in writing to the RWQCP by November 15 of that same calendar year. The information will be used to determine the applicability of the 2.0 mg/l copper effluent limit to the Permittee's cooling tower blowdown to the sanitary sewer.

16. Toxic Organic Management Plan

The Permittee shall implement its Toxic Organic Management Plan (TOMP) throughout the term of the permit. The TOMP shall be updated whenever any

significant change in the inventory, usage, or management of toxic organic compounds occurs. The updated TOMP shall be submitted to the RWQCP for approval within (30) days.

17. Spill Control Plan (SCP)

The Permittee shall implement its SCP throughout the term of the permit. The SCP shall be updated whenever any significant change occurs at the facility that would affect the SCP. The updated SCP shall be submitted to the RWQCP for approval within (30) days.